# Data Sheet (Cat.No.T38074)

C12H22O10S



## Thiodigalactoside

Formula:

#### **Chemical Properties**

CAS No.: 51555-87-4

Molecular Weight: 358.36

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

#### **Biological Description**

Description	Thiodigalactoside (TDG), a non-metabolizable disaccharide, serves as an orally active, potent galectin (GAL) inhibitor, exhibiting Kd values of 24 µM and 49 µM for GAL1 and GAL3, respectively. Demonstrating anti-inflammatory and anti-cancer properties, it significantly diminishes body weight gain in diet-induced obese rats.
Targets(IC50)	Galectin
In vitro	Thiodigalactoside (TDG; 250 and 500 $\mu$ M) demonstrates a dose-dependent decrease in fat accumulation, as evidenced by reductions in triglyceride (TG) content and Oil Red O (ORO) staining[1].
In vivo	Thiodigalactoside (TDG; 5mg/kg; IP; once per week for 5 weeks) results in dramatic inhibition of HFD-induced body weight gain. Thiodigalactoside (5mg/kg; oral; daily or weekly for 5 weeks) gave less reduction in body weight gain compare with i.p.[2].

### **Solubility Information**

Solubility	PBS (pH 7.2): 10 mg/mL	
	H2O: 90 mg/mL (251.1 mM), Sonication is recommended.	
	DMF: 1 mg/mL	
	DMSO: 50 mg/mL (139.52 mM)	
	(< 1 mg/ml refers to the product slightly soluble or insoluble)	

#### **Preparing Stock Solutions**

	1mg	5mg	10mg
1 mM	2.7905 mL	13.9525 mL	27.9049 mL
5 mM	0.5581 mL	2.7905 mL	5.581 mL
10 mM	0.279 mL	1.3952 mL	2.7905 mL
50 mM	0.0558 mL	0.279 mL	0.5581 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

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#### Reference

Hilde van Hattum, et al. Tuning the Preference of Thiodigalactoside- And Lactosamine-Based Ligands to galectin-3 Over galectin-1. J Med Chem. 2013 Feb 14;56(3):1350-4.



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